

Security 101

Why Are We Here?

2017 ECAM Convention

Presented by:
Mississippi Secretary of State's Office



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The Problem

- Multiple goals for information thieves:
 - Profit
 - Nuisance
 - Notoriety
- As high-speed internet access becomes more available, criminal “playgrounds” increase in availability.



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The Cold Hard Facts

- In 2015, the International Telecommunication Union estimated about **3.2 billion people**, or almost half of the world's population, are online.
- Nearly 1 million new malware threats released every day.¹
- According to Commtouch's Internet Threats Trend Report for the first quarter of 2013, an average of **97.4 billion spam e-mails** and **973 million** malware e-mails were sent worldwide each day in Q1 2013²



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1 – <http://money.cnn.com>

2 – www.esecurityplanet.com

Are You A Target

Everyone is potentially a target. Even if your personal information is not the target, your processing power or storage space may happen to be!

Crime increases with opportunity
and accessibility.



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What Makes You Vulnerable

- Failing to take security seriously.
- Running out-of-date software.
- Surfing “questionable” websites.



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What Could Happen

- Install key loggers, Trojan horses, or viruses
- Destruction, theft, or alteration, of your data
- Storage of illegal files on YOUR computer
- Use your system to send harassing e-mail
- Launch attacks against others
- Identity theft



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Imagine If THIS Happened

You leave after a long day at work. Since you will just be back tomorrow, you leave your computer on and logged in. Later on the cleaning crew is hard at work. They decide to do a little “recreational” surfing to a child porn site or to download some illegal software.

- It is YOUR account that appears to have been doing the surfing!
- How difficult would it be to explain?



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How Can I Protect Myself

- Stay Educated – cannot protect yourself against a threat if you are not aware of it.
- Do not assume you are safe – make sure to use common sense

“Security is a process, not a product”
– Bruce Schneier



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Best Practices

- Security is REDUCTION of risk, not a 100% cure.
- Maintain your computer with proper updates
 - Would you leave a broken window or door unfixed?
- Do not run programs from unknown sources
 - Would you eat food off the street?
- Use caution in giving information on the internet
 - Would you share information with an unknown caller?



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S.A.F.E.

- **SAFEGUARD** Your Password
- **ASSURE** Proper System Updates
- **FACE** Your Fears
- **EVERYBODY** Must Do Their Part



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What Is The Cost?

- Software updates to programs you own are typically free!
- There are many reputable and free security tools, such as antivirus and firewall software!
- The biggest cost is TIME!



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What We Will Cover

- Password safety
- E-Mail security
- Web surfing safely



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Passwords –
The Necessary Evil



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Questions

- Why are passwords important?
- How can I make a strong password...that I can remember?
- How can I keep my password safe?



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Where Do You Use Passwords

- E-Mail Accounts
 - Home Computers
- Bank Accounts
 - Internet Access
- Work Computers
 - News Sites
- Instant Messaging



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Why Are Passwords Important?

- They provide access to varied and important resources
- They guard information from unauthorized people



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Legal Liability

- The Federal Trade Commission recently showed there are legal consequences for organizations that have weak security
- The Sarbanes-Oxley Act of 2002 (SOX) is an act passed by U.S. Congress in 2002 to protect investors from the possibility of fraudulent accounting activities by corporations.
- HIPAA (Health Insurance Portability and Accountability Act of 1996) is United States legislation that provides data privacy and security provisions for safeguarding medical information.



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By The Numbers

In 2015, the International Telecommunication Union estimated about 3.2 billion people, or almost half of the world's population, would be online by the end of the year 2016. Of them, about 2 billion would be from developing countries, including 89 million from least developed countries.



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Why Do They Want My Password

- Can you approve a purchase order?
- From your computer, a thief can attack others anonymously.
- With your password, they can effectively “become” you.



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What Harm Could Be Done

- Identify theft;
- Use your machine to store illegal items such as pornography or pirated software;
- Use your computer to send out spam or viruses; and/or
- Launch attacks, such as Distributed Denial of Services (DDoS).



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How Do They Steal It

- Look over your shoulder;
- Find it in a drawer or under the keyboard;
- Powerful, and often free, password cracking programs;
- Guess at it, especially if they know you; or
- Just ask!



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What Makes a Weak Password

- Includes personal information about user;
- Consists of known words that can be found in dictionaries;
- Contains number or letter sequences; and/or
- Contains letter-to-number substitutions, like E for 3, O for zero, or @ for A.



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Weak Password Examples

- Sports teams or terms: **LouvilleSlgr**
- Number sequence: ***12345***
- Letter string: **AAAAAA**
- Mixed-case sequence: **ABcdEFgh**
- Company name: **AcmeIT**
- Keyboard sequence: **QwERty** or **ASdFgh**



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What Makes a Strong Password

- Should change at least every 90 days
- Should not be reused for one year
- Should be at least eight characters
- Should contain characters from three of the four following classes of characters
 - Special characters (!, *, \$, or other punctuation symbols)
 - English uppercase letters (A, B, C)
 - English lowercase letters (a, b, c)
 - Numerals (1, 2, 3)



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How To Make a Complex Password

- Pick a sentence that reminds you of the password. For example:
 - if my car makes it through 2 semesters, I'll be lucky
(imcmit2s,Ibl)
 - only Bill Gates could afford this \$70.00 textbook
(oBGcat\$7t)
- Use a “Password Generator” program, often available for free.



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Strong Password Examples

- *J*p2leO4>F.* (from a generator)
- Ydw2~twn (*Yankee Doodle went to town*)
- d0g+C4t! (dog and cat)
- TmB1w2R! (This May Be One Way To Remember)



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Protect Your Password

- Do not say it aloud!
- Do not let others know it!
- Do not type it in an e-mail!
- Do not write it down!



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Guard Your Password

Your Information Services staff, Internet service provider, bank, and other reputable establishments DO NOT need your password to assist you!



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Passwords Are Like. . .

- You shouldn't share them with your friends.
- You shouldn't set them on the desk beside your keyboard or tape them to your monitor.
- You should change them regularly.
- When lost, it's better to get a new one than to try and find the old.
- When in doubt, throw it out.



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Passwords Are Like. . .

- Nobody needs to know what kind you have or where you get them from.
- Reversing them only helps for a little while.
- Some are better than others; some just stink.
- If you make a mistake with one, get a new one - Fast!
- If you see them on prime time TV, you've got problems.



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Questions



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You've Got Mail!



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A Few Definitions

- SPAM – unsolicited bulk or junk email.
- Phishing – lures the victim into revealing information based on the human tendency to believe in the security of a brand name because they associate the brand name with trustworthiness.
- Executable – a program that is ready to be run on a computer.



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More Terms

- Spoofing – pretending to be someone else.
 - E-Mail addresses can be spoofed to make you think the message is from a legitimate source.
 - Web addresses can be spoofed to make you think you are on a legitimate site.



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Common Schemes

- Advance fee fraud – requires the person to advance fees necessary to facilitate the transfer of money or other goods.
- Lottery scams – indicates you have won some large lottery or sweepstakes requiring a fee to collect prize.



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SPAM Sample

No. 4147120

Official Certificate of Pre-Approval
2005 CAR LOAN MAX APPROVALS

Wiltz, _____

CarLoanMax's network of hundreds of lenders throughout the country will instantly match you up with a lender in your area that is ready to give you the financing you deserve.
[Please click here](#) to check your status- the process is free.

Registered Document above for Wiltzonly _____

- ❖ Get approved for a car loan regardless of your credit!
- ❖ Put our nationwide network of car dealers to work for you and find a car loan right in your area.

It takes JUST 60 SECONDS and it's 100% FREE.
Simply click below to search in your area.

Name: Wiltz _____
[Complete info here.](#)

Apply Now Free
SECURE LINK

S/C: 00862534456


LSR: 0098774



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Spooofing Sample

[FWD: Scanned document <1 page ~23 KB> -- 5/8/2006 11:17:09 AM] - Message (Plain Text)

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward

This message was converted to plain text.

From: kimberly@startingsuccess.com
To: cbcase@bellsouth.net
Cc:
Subject: [FWD: Scanned document <1 page ~23 KB> -- 5/8/2006 11:17:09 AM]
Attachments: Eleanor Gaines Price.pdf (23 KB)

Hi Bishop, here is Na Na's bio.

Junk E-mail - Microsoft Outlook

File Edit View Go Tools Actions Help

New Not Junk Reply Reply to All Forward Send

Mail

Favorite Folders

- Inbox
- Unread Mail
- For Follow Up
- Sent Items

All Mail Folders

- Mailbox - Charlie Case
- Deleted Items (1)
- Drafts
- HP Training
- Inbox
- Junk E-mail [13]
- Outbox
- Sent Items
- Trouble Shooting
- Search Folders
- Archive Folders
- Mailbox - Help Desk
- Deleted Items
- Drafts
- Inbox
- Junk E-mail
- Outbox
- Sent Items
- Search Folders
- Personal Emails
- Work Folder
- Deleted Items
- EIS ITransfer

Look for:

Junk E-mail

From

- Diane M
- Zachari

Date: Last We

- Gamble
- Auction
- Auction
- Equal
- Vegas8
- Casino
- kimberly

[FWD: Scanned document <1 page ~23 KB> -- 5/8/2006 11:17:09 AM] - Message (Plain Text)

kimberly@startingsuccess.com

This message was converted to plain text.

To: cbcase@bellsouth.net

Attachments:

Hi Bishop,

Spooofing.com - spooofing.com - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Reload Print Mail News RSS Feeds

Address http://www.spooofing.com/

Google spooofing example Search 3 blocked Check AutoLink AutoFill Options spooofing example

Spooofing.com

Sponsored Links Home

The Official State Web Site of Mississippi - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Reload Print Mail News RSS Feeds

Address http://www.ms.gov/index.jsp

Google spooofing example Search 3 blocked Check Look for Map AutoFill Options spooofing example

MISSISSIPPI gov

Home About Mississippi Site Index State Agencies Contact Us

Photo of antebellum home

SEARCH go Help

Today is... May 18, 2006

Welcome to The Official State Web Site of Mississippi

Mississippi Headlines

State Senators' Votes Soon to be Posted Online

May 15, 2006 - Mississippians with access to the Internet will be able to monitor how their senators vote, starting with the 2007 legislative session. The House is considering a similar move, but any decision will be made later this year.

Former Congressman Sonny Montgomery Dies

May 12, 2006 - Former Rep. Gillespie V. "Sonny" Montgomery championed the needs of veterans during his 30 years in Congress and was hailed for pushing through a modernized GI Bill in 1984 that boosted recruiting.

President Bush Praises Gulf Coast Graduates

May 11, 2006 - President Bush praised the post-Hurricane Katrina resilience of Mississippi Gulf Coast Community College graduates Thursday.

Business Boom in Waveland

May 10, 2006 - The Home Depot and Lowe's Home Improvement - both set to open later this year - are among dozens of new businesses headed to Waveland, La.

How Do I...

- assist in the Hurricane Katrina relief effort?
- get research help for a student project about Mississippi?
- get a copy of a birth, death, or marriage certificate?
- stop telemarketing calls?

full list

Quick Links

- Travel Alerts and Road Conditions
- Hurricane Katrina

Phishing Example



Dear eBay Member,

We regret to inform you that your eBay account could be suspended if you don't re-update your account information.

To resolve this problem please visit link below and re-enter your account information:

https://signin.ebay.com/ws/eBayISAPI.dll?SignIn&sid=verify&co_partnerId=2&siteid=0

If your problems could not be resolved your account will be suspended for a period of 24 hours, after this period your account will be terminated.

For the User Agreement, Section 9, we may immediately issue a warning, temporarily suspend, indefinitely suspend or terminate your membership and refuse to provide our services to you if we believe that your actions may cause financial loss or legal liability for you, our users or us. We may also take these actions if we are unable to verify or authenticate any information you provide to us.

Due to the suspension of this account, please be advised you are prohibited from using eBay in any way. This includes the registering of a new account. Please note that this suspension does not relieve you of your agreed-upon obligation to pay any fees you may owe to eBay.

Regards,

Safeharbor Department eBay, Inc

The eBay team

This is an automatic message, please do not reply

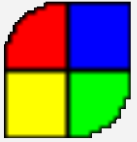
Copyright © 1995-2005 eBay Inc. All Rights Reserved.

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StressRelief.EXE

Executable Sample



Uno.exe

Common Executable File Extensions:

.exe - Executable files, typically an application program.

.com - MS-DOS "command" file

.bat - Batch file

.js - Javascript file

.vb or **.vbs** - Visual BASIC file

.scr - Screen Saver



Hangman.exe

System Files Extensions:

.inf - Setup Information

.reg - Registration entries



LimeWireWin.exe



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Scams

- Scam - a fraudulent business scheme,
- An attempt to intentionally mislead a person usually with the goal of financial or other gain,
- Related to “phishing.”
- Examples of E-Mail Scams:
 - Advance Fee Scam, such as the Nigerian email or lottery scams
 - Cashier check scams
 - Auction scams



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Advance Fee Scams

- Requires victim to pay an up-front cost, fee, or tax to have the money transferred.
- Highly innovative and very creative.
- Typically stresses strict confidence.
- Documents sent to the victim are clever forgeries of official-appearing documents.



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Want 25% of \$50 Million?

- The Nigerian scams are most widespread among the e-mail scams.
- Individuals have been killed in attempting to follow-through or as a result of this scam which plays on individual greed.



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Lottery Scams

- Victims notified by e-mail (or regular mail) that a prize has been won.
- Victim informed that money or financial institution information needed to access the “winnings.”
- Victim open to potential loss of money, identity theft, and fraudulent use of their bank account.



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Hoaxes

- Stay Out of the Mall on Halloween Warning
 - Terrorist attacks
- Female Abductions Warnings
 - Women tricked and kidnapped
- Poison Perfume Warning
 - 7 women have died smelling sample perfume/
terrorist attacks



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Hoax Sample

Spooky

December 2003

DO YOU BELIEVE THIS ONE?

The guy in the photo was with his friends and he asked one of his friends to take his picture in that very place. While his friend was taking the picture he screamed and fainted, 2 days later he died in the medical college. Doctors said he died because of heart attack. When the photos were exposed, in the last photo there was a lady standing right beside him though friends claim he was standing alone. Many people said it is a rumor and the picture is the result of the blessings of latest technology. However, the photo itself is very scary and I'm sure you'll also feel the same way I've felt. Here you go with the photo!!!



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Hoaxes

Don't believe anything
you hear and only half
of what you see.



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Why Hoaxes Are So Dangerous

- Company Revenue Loss

50,000,000 people * 1/60 hour * \$50/hour = \$41.7 million

- The Ability to Multiply

Generation	1	2	3	4	5	6
Number of Messages	10	100	1,000	10,000	100,000	1,000,000



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E-Mail Security Software

- AVG (Free)
- SpamCombat v.2.61 (Free)
- Norton Anti-Virus (Annual Fee)
- McAfee Anti-Virus (Annual Fee)



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Safety Tips

- Multiple Email Account
- Protect Your Password
- Be Cautious When Opening Attachments
- Scan Attachments
- Keep Personal Information Private
- Protecting Yourself Protects Others
- Opt Out of Unnecessary Mailing List



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What NOT To Do

- Don't Respond to Unsolicited Email.
- Don't Divulge Personal Information.
- Don't Forward Chain Letters.
- Don't Open Attachments Without Scanning Them.
- Don't Log Into Sites You Have Been Directed to Via a Link



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Questions



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Surfing The Web...
What's The Harm?



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Words To Know

- Spyware
- Adware
- Malware



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Spyware

Spyware is software that collects and transmits user specific behavior and information, with or without permission.



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What Can Spyware Do

- Record & Report Key-Strokes.
- Record & Report Web-Browsing.
- Cause System Errors Because Of Code Conflict.
- Cause A System Crash.



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Adware

Buy Me!

Adware generates advertisements such as pop-up windows or hotlinks on Web pages that are not part of a page's code.



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What Does Adware Do

- Adware may add links to your favorites and your desktop. It will often change your home page and your search engine to sites that earn income from various advertisers.
- Adware programs do not give users enough notice or control.
- Stop the user from make system changes.



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Pop-Ups & Pop-Unders



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Malware

“Malware” is short for 'malicious software' and is usually used as a catch-all term to refer to any software which causes damage to a single computer, server, or computer network.



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Viruses Are Here, Too

- Trojan.Tabela.G
 - SymbOS.Commwarrior.G
 - SymbOS.Commwarrior.H
 - SymbOS.Commdropper.B
 - SymbOS.Commwarrior.F
 - SymbOS.Bootton.F
 - SymbOS.Mabtal.B
 - Trojan.Checkraise
- There are many different types of computer viruses.
 - Millions of new viruses are released daily.



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Cookies

- Text Files
- Stored On User's PC Hard Drive
- Contains Browsing Information
 - Time & Date
 - Website Visited
 - Purchase Information
- Contains User's Information
 - User Name
 - Password



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Can I Surf Safely

- Look for Misspelled Words on WebPages
- Look for Gaudy Unprofessional WebPages
- Don't Login Without A SSL Connection
- Don't be "Click" Happy
- Keep Security Updates Current
- Keep an AV Application Running
- Scan Downloads
- Scan Your PC On A Regular Basis

YES!!!



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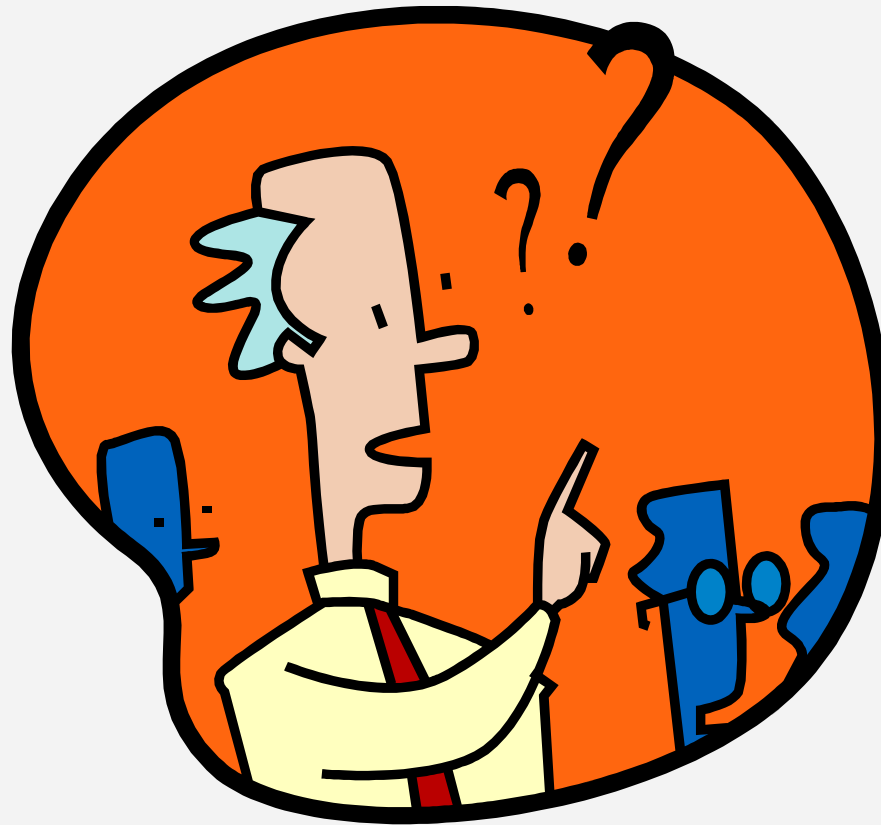
What If I Still Catch Cooties

- Run AV Applications
- Run Anti-Adware Applications
- Delete Cookies
- Uninstall Recently Installed Downloads
- Restore Your PC To Its Last Known Good Configuration.
- Format The Hard Drive and Reinstall OS
- Reinstall Your OS



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Questions



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